

CLAIMS

What is claimed is:

1. A selective method for cleaning material from a wafer comprising:
providing an etchant dispensing apparatus having an inlet thereto for an etchant agent and a tubular member having at least one thin annular edge thereon;
placing an area of said wafer within an annular member of said etchant dispensing apparatus, said at least one thin annular edge of said annular member of said etchant dispensing apparatus located adjacent a portion of said wafer;
aligning said wafer and said etchant dispensing apparatus;
dispensing an etchant onto said at least one area of said wafer by said etchant dispensing apparatus; and
removing said etchant.
2. The method of claim 1, wherein said placing includes aligning said wafer in a substantially perpendicular position in relation to said etchant dispensing apparatus.
3. The method of claim 1, wherein said aligning comprises aligning said wafer to said etchant dispensing apparatus.
4. The method of claim 1, wherein said aligning comprises aligning said etchant dispensing apparatus to said wafer.
5. The method of claim 1, wherein said aligning comprises aligning said wafer substantially perpendicular to said at least one thin annular edge of said annular member of said etchant dispensing apparatus.

6. The method of claim 1, wherein said aligning includes aligning said at least one thin annular edge of said annular member of said etchant dispensing apparatus substantially perpendicular to said portion of said wafer adjacent said at least one area thereon.

7. The method of claim 1, wherein said material includes at least one of chemical mechanical planarization process slurry material, a metal material, a photoresist material, a dielectric material, and a polysilicon material.

8. The method of claim 7, wherein said metal material includes a refractory metal.

9. The method of claim 1, wherein said removing said etchant includes removal of said etchant by one of suction and vacuum.

10. The method of claim 1, further comprising cleaning a surface of said wafer.

11. The method of claim 10, wherein the cleaning said wafer includes:
cleaning a surface of said wafer with a cleaning agent; and
rinsing said wafer in deionized water.

12. The method of claim 1, wherein said etchant includes at least one of a liquid, a liquid vapor, a gas, ammonia, hydrogen fluoride, nitric acid, hydrogen peroxide, ammonium fluoride, and mixtures thereof.

13. A selective cleaning method for removing a material from a wafer for a semiconductor fabrication process, said process comprising:
chemical mechanical planarizing said wafer prior to said removing of said material from said wafer;
providing an etchant dispensing apparatus having a tubular member, an annular member having at last one thin annular edge thereon, and an inlet for etchant;

aligning at least one area of said wafer and at least a portion of said etchant dispensing apparatus;
dispensing said etchant onto said at least one area of said wafer; and
removing said etchant using a portion of said etchant dispensing apparatus.

14. The method of claim 13, wherein said aligning includes one of aligning a portion of said wafer in a substantially perpendicular position in relation to said etchant dispensing apparatus, aligning a portion of said wafer to said etchant dispensing apparatus, aligning said etchant dispensing apparatus to said wafer, and aligning said wafer substantially perpendicular to said thin annular edge of said etchant dispensing apparatus.

15. The process of claim 13, wherein said material includes at least one of chemical mechanical planarization process slurry material, a metal material, a photoresist material, a dielectric material, and a polysilicon material.

16. The process of claim 15, wherein said metal material includes a refractory metal.

17. The process of claim 13, wherein said removing said etchant includes removal of said etchant by one of suction and vacuum.

18. The process of claim 13, further comprising cleaning a surface of said wafer.

19. The process of claim 18, wherein the step of cleaning said wafer includes:
cleaning said wafer with a cleaning agent; and
rinsing said wafer in deionized water.